DOCUMENT RESUME

ED 337 643 CE 059 294

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TITLE Comparative Analysis of High School Graduates in Central Pennsylvania from Vocational, Academic and General Curricula for the Years 1982, 1985 and 1988 for Lancaster and Lebanon Counties.
INSTITUTION Lancaster County Vocational-Technical Schools, Pa.
SPONS AGENCY Pennsylvania State Dept. of Education, Harrisburg. Bureau of Vocational and Adult Education.
PUB DATE 90
NOTE 50p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Education; Educational Improvement; Employment Patterns; Females; *General Education; Graduate Surveys; *High School Graduates; High Schools; Males; *Outcomes of Education; Postsecondary Education; Program Improvement; *Vocational Education; Wages
IDENTIFIERS *Pennsylvania (Lancaster County); *Pennsylvania (Lebanon County)

ABSTRACT

A study compared the records of high school graduates in respect to curriculum type and high school education, postsecondary education, and work experience for Lancaster and Lebanon Counties in Pennsylvania. Data were collected through questionnaires mailed to all graduates from the years 1982, 1985, and 1988 and from high school transcripts. The study involved a total population of 15,245, from which 32 percent responded. Some of the results of the survey were as follows: (1) more than 85 percent of the respondents are either working full time or are enrolled in postsecondary education; (2) academic and vocational graduates who are employed receive a weekly salary $20 greater than general curriculum graduates; and (3) most respondents who had attended vocational programs were satisfied with them, although some wanted to see improvements in curriculum. The following recommendations were made: (1) academic and vocational curricula should be more integrated; (2) recruiting for academic and vocational programs should continue; (3) the special needs population must be considered; and (4) general curriculum students should be directed toward vocational or academic programs. (Appendixes include the survey instruments, list of variables, transcript collection, and charts and tables.) (KC)

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COMPARATIVE ANALYSIS OF HIGH SCHOOL GRADUATES IN CENTRAL PENNSYLVANIA FROM VOCATIONAL, ACADEMIC AND GENERAL CURRICULA FOR THE YEARS 1982, 1985 AND 1988 FOR LANCASTER AND LEBANON COUNTIES

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Funded through a grant from the
Pennsylvania Department of Education

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I. Executive Summary

The purpose of this study was to compare the population of high school graduates' records in respect to curriculum type and the individuals' high school education, post-secondary education and work experience. The study was initiated through a grant funded by the Pennsylvania Department of Education. The parameters of the study information needed were defined by the department. Any additional information obtained was determined by the locally funded agency. The research was performed during the 1989-90 school year for Lancaster and Lebanon Counties in Pennsylvania. The Lancaster County A.V.T.S. subcontracted to Lebanon County A.V.T.S. to perform data collection of Lebanon County. The Lancaster County A.V.T.S. also subcontracted with The Pennsylvania State University for consulting expertise and Millersville University's RSI Service for the data analysis.

The collection of data was performed in two operations: (1) The questionnaire mailed to each graduate for the years 1982, 1985 and 1988; (2) The collection of transcript data (i.e. student permanent record). The transcript data was collected upon receipt of the completed returned questionnaire. The need to determine curriculum type was the foundation of the study. Specific parameters listed within the terms and definitions were developed and utilized for the collection of the transcript data. This guide remained consistent between both counties. Each student was classified to a curriculum type as determined by the definition.

The data collected by the questionnaire addressed various subjects: the students' mobility, post-secondary education, work experience, and salary. The data accumulated from schools in both counties was combined in one data set. All results, findings and recommendations of this study are based on the total data collected. Individual county and individual school district data bases have been provided to the administrators of each district for their specific use.

The study involved a total population of 15,245 individuals from which 32 percent responded. All results, findings and recommendations are based on the 32 percent of the sampled population.

The results of this study will be presented from the vocational perspective and individual school districts may choose to utilize these findings in numerous ways. To clarify the study, the findings and recommendations of the initial results will be grouped according to personal characteristics, high school education experience, vocational education experience, and post-secondary education and experience.

The respondents of the survey were identified according to curriculum type. Each individual's transcript was assessed according to the courses taken. The individuals were grouped according to Academic (ACC), General (GEN), Area Vocational Technical School (AVTS) or Home School Vocational (HSVOC).

1. PERSONAL CHARACTERISTICS

The respondents to this survey showed a balance between ACC, GEN, and vocational students. The significant results displayed with respect to curriculum type was that from 1982 to 1988 many individuals chose the academic tract of curriculum. The general students remained predominantly constant, but the vocational students (AVTS and HSVOC) suffered a decline.

The respondents to the survey with respect to race were mostly white and were equal with respect to males and females. Minority individuals comprised only 2 percent of the study population. Furthermore, most of the individuals that responded to the survey were successful. This is evident and supported by the high response rate of individuals who were either working full-time or attending a post-secondary institution full-time.

The response rate for special needs population was low. This is due to the fact that these individuals were unable to be identified. Of the identified individuals the predominant group attended the vocational schools. This factor supports the need to continue to offer assistance for these individuals in the vocational schools.

2. HIGH SCHOOL EXPERIENCE

This section examined numerous variables with respect to the respondents' credits, types of courses taken, and G.P.A. From the results of the study, one significant factor was the highest level achieved with respect to math and science. The largest percentage of vocational students did not obtain completion of courses greater than general math and general science. This lack in academics was significantly lower than the general education students. Furthermore, the G.P.A. for the vocational students was approximately .5 of a grade lower than their general education counterparts.

The total credits obtained by all groups surveyed increased from 1982 to 1988. This indicates that the public high schools were addressing the need to increase graduation requirements. Although many school districts added ninth grade to their total high school credit count, those credit were subtracted for the purposes of this study. Only credits earned in grades 10,11 and 12 were examined.

3. VOCATIONAL EXPERIENCE

This section of the study produced factors which indicated that the vocational schools have made a significant improvement in information about the vocational schools offerings. The increase in student career awareness related to the vocational schools and public relations in general is a credit to counselors and all individuals involved.

The predominant reason why students did not attend the vocational school hinges on the fact that the respondents planned to attend college or a post-secondary institution. Other options, such as length of the bus ride or peer pressure, did not produce significant responses. The interest to pursue a post-secondary institution is evident and verified by the increase in individuals choosing the academic tract in 1988 at the expense of vocational education.

From the respondents who attended the vocational schools, most indicated satisfaction with the program. When asked what they would hope to see improved, the respondents stated the need to improve the curriculum of the programs. Equipment, instructor ability and facilities as other options did not warrant significant responses to be considered. This finding supports the efforts of the vocational schools in the past to concentrate on program improvement with respect to equipment and instructor preparation and site curriculum development as the next consideration of the future.

4. POST-SECONDARY EDUCATION AND EXPERIENCE

Due to the nature of the economy the study showed a very favorable responses from the individuals with respect to full-time employment. Over 85 percent of the respondents ar either working full-time or are enrolled in a post-secondary institution. This further supports the premise that most of the respondents are successful.

A striking factor of the study shows that the academic and AVTS respondents that are employed are receiving a weekly salary $20 greater than the general education and HSVOC graduates. This data indicates that the education and training of the academic and AVTS individuals is satisfactory. It also supports the need to integrate academics and vocational education as expressed by the amendments to the Carl Perkins Act.

When questioned about the first type of employment after graduation 76 percent pursued an occupation related to their subject or pursue a post-secondary institution. This further supports the premise that individuals have received career guidance either at the home school or vocational institution.

Key Recommendations and Discussion

Discussion items and possible recommendations of this study will be highlighted. Although these items are broad the findings of this study support the need for discussion.

1. Due to the findings the need to pursue a combined effort from the sending schools and vocational schools with respect to integration of academic and vocational education must exist. This critical endeavor could take the form of applied academics (i.e. math, science and English). Another avenue may be to increase articulation and/or advanced placement with post-secondary institutions. In addition, the Tech Prep concept may possess a feasible option for future students.

2. The performance of job placement and post-secondary institution options must continue. Academic and AVTS students are earning a higher salary than general and HSVOC students. The need to maintain the quality of education must continue in order to sustain this advantage. The importance to continue public relations and career counseling will aid to keep this avenue positive.

3. The need to remain sensitive to the special needs population is another critical aspect. The population attending the vocational school is evident. Remediation, special assistance and support should remain due to the predominant amount of special students in the vocational schools.

4. The general curriculum student should be directed toward other career options (i.e. academic or vocational). Academic and AVTS students are pursuing their career choices, but the general curriculum individuals seem to be stagnant and their salaries and occupations are not as defined. Furthermore, many of these individuals suggested that if they could repeat high school, they would opt for a vocational tract. Although this group consisted of only 5 percent of the surveyed population, if these individuals would have attended the vocational schools, the schools would be near capacity.

This overview addressed the key recommendations of this study. Specific items within this report, detail each question of the survey and identify other results. The need to perform a detailed examination and obtain feedback from superintendents, committee members, instructors and the community will help the administration produce sound educational benefits for students in the future in Lancaster and Lebanon counties.

II. Introduction

Scope of the Study

The purpose of this study was to examine and compare past high school graduates with respect to education, work experience and post-secondary training and education. The need to identify and group the graduates according to curriculum type was critical. Individuals were classified as being Academic (ACC), General (GEN), Area Vocational-Technical School (AVTS) or Home School Vocational (HSVOC). The intent was to obtain an equal number of respondents from the curriculum types. The research was funded by the Pennsylvania Department of Education, Bureau of Vocational and Adult Education. The data collection and research was performed for two counties in Central Pennsylvania, Lancaster County and Lebanon County. The two counties provided a cross-sectional sampling of individuals from urban to rural. The Lancaster County AVTS was the recipient of the grant and responsible for the data collecting and reporting. The data correlation and analysis of the data were conducted by Millersville University. The Pennsylvania State University was utilized in the study for their expertise and insight on research analysis.

Overview

This report addresses concerns of the Pennsylvania Department of Education. The primary focus was the need to examine a high school student's curriculum type and that curriculum's effect or lack of effect on post-secondary educational choices and work experience. The study was performed for two counties in South Central Pennsylvania – Lancaster County and Lebanon County. The two counties do possess similarities, but are ideal to present a broad prospective of individuals. Lebanon County encompasses a predominant rural population. Lancaster County has a greater concentration of urban population mixed with rural districts.

The individuals surveyed were high school completers from years 1982, 1985 and 1988. The survey involved 22 public school districts, totaling 15,245 graduates from the specified years. The approach to obtain the data did not differ between counties and the information gathered was identical. The Lebanon County A.V.T.S. was to function under the direction of the Lancaster County A.V.T.S. A local university (i.e. Millersville University, Millersville, PA.) was utilized to construct the data base and provide analysis and needed correlations. The Business Data Processing class at Willow Street Vo-Tech School was utilized to input data related to mailing addresses and school districts.

The study involved the 16 public school districts in Lancaster County and the six public school districts in Lebanon County as listed on the following page.

Lancaster County Public School Districts

Cocalico School District
Columbia Borough School District
Conestoga Valley School District
Donegal School District
Eastern Lancaster County School District
Elizabethtown Area School District
Ephrata Area School District
Hempfield School District
Lampeter-Strasburg School District
School District of Lancaster
Manheim Central School District
Manheim Township School District
Penn Manor School District
Pequea Valley School District
Solanco School District
Warwick School District

Lebanon County Public School Districts

Annville-Cleona School District
Cornwall-Lebanon School District
Eastern Lebanon County School District
Lebanon School District
Northern Lebanon School District
Palmyra Area School District

The study identified a multitude of data collection variables. The parameter for the data collection review was based on curriculum type, year of graduation, gender, race and other variables addressing work experience, mobility, post-secondary education and future interests.

All statistics presented in this study are of the total population for both counties. Separate data runs were performed for the two counties. The purpose of this was to provide local districts with specific data relevant to their area.

The project involved a two-step system for data collection. (1) The individual survey information (i.e. questionnaire data) and (2) the student record information (i.e. transcript data). This process was massive for the vocational school and individuals involved. The transcript data collection was conducted only on the individuals who responded to the mailed questionnaire. The justification for this collection was based on the extensive number of individuals surveyed.

Brief Demographics

The research performed in this study involved Lancaster County with a population of 420,922 and Lebanon County with a population of 114,984 according to the projected 1990 census. The initial study involved the need to construct a survey that would be identical for both counties. This was necessary to maintain validity and uniform data collection.

The population sampled was determined by the total number of students that graduated from both counties during the years of 1982, 1985 and 1988. This initial sampling totalled 15,245. By creating the initial sampling of the total population of graduates, random selection was not necessary. Furthermore, by sampling the total population, the response rate was greater.

The data analysis was based on 4,792 respondents or just under 32% of the initial sampling. An additional 765 individuals or 5% of the population responded to the questionnaire, but complete data was not provided or available on these individuals.

From the total population that responded to the initial survey:

29% were graduates in the year 1982
33% were graduates in the year 1985
38% were graduates in the year 1988

The breakdown of this population according to curriculum type was 37% academic, 31% general, and 32% vocational - AVTS and HSVOC combined. The data in this survey is based on curriculum type and year of graduation which indicated an equal proportion of academic, general and vocational students (AVTS and HSVOC combined.)

For 1982: 33% Academic, 30% General, 37% Vocational
For 1985: 34% Academic, 34% General, 32% Vocational
For 1988: 43% Academic, 30% General, 27% Vocational

III. Terms and Definitions/Research Questions

The need to define specific terms related to this study was critical to the analysis of the data. The following terms and definitions were utilized in the survey construction, data collection, and variable correlations.

- **Completer** - An individual that graduated from a public high school in one of the survey years of 1982, 1985 or 1988.
- **Survey Years** - The years which this survey encompassed, i.e. 1982, 1985, 1988.
- **Lancaster County** - One of the two counties involved in this study consisting of 16 public school districts.
- **Lebanon County** - One of the two counties involved in this study consisting of 6 public school districts.
- **Lancaster County Area Vocational Technical School** - The recipient of the grant funded by the Pennsylvania Department of Education.
- **Lebanon County Area Vocational Technical School** - The center utilized in this study to collect data for all graduates of Lebanon County schools.
- **Transcript Data** - The data collected from an individual's high school permanent record.
- **Questionnaire Data** - The data collected from individuals through the use of a mailed survey.
- **Vocational Student** - An individual who has been identified according to curriculum type as being vocational either at the home school or the A.V.T.S.
- **Home School Vocational Student (HSVOC)** - An individual who has taken a predominant amount of courses in grades 10, 11 and 12 related to approved vocational courses taught by certified vocational instructors.
- **Area Vocational Technical School Student (AVTS)** - An individual who has enrolled in an approved vocational program at the AVTS during grades 10, 11 and/or 12 taught by certified vocational instructors.
- **Academic Student (ACC)** - An individual who has taken courses in grades 10, 11 and 12 with the following criteria: two years of a foreign language, two years of mathematics grater than general math, and two years of science greater than general science.
- **General Student (GEN)** - An individual who has taken courses in grades 10, 11 and 12 which are predominantly general courses. The individual was not identified as academic or vocational.
- **Curriculum Type** - The classification of each individual as being one of the following: Academic, General, Home School Vocational, or Area Vocational-Technical School.
- **G.P.A.** - The cumulative grade point average for individuals in this study based on high school grade 10, 11 and 12.
- **Salary** - The gross amount an individual has earned while working. This amount was based on a weekly rate and calculated as a 40 hour week.
- **Full-time Employment** - An individual who is working for 35 hours per week or more.

Research Questions

There are four research questions for this study. The specific variables are identified within each question.

Question 1: What are the personal characteristics of the population and what are their effects for the sample years 1982, 1985 and 1988 for the following variables?

Curriculum distribution to year of graduation
Gender to curriculum type and year of graduation
Race to curriculum type and year of graduation
Status as handicapped to curriculum type and year of graduation
Parent's education to curriculum type and year of graduation
Mobility to curriculum type and year of graduation

Question 2: What are the high school educational experiences of the population and what are their effects for the sample years 1982, 1985 and 1988 for the following variables?

Grade point average (GPA) to curriculum type and year of graduation
Total credits to curriculum type and year of graduation
Total vocational credits to curriculum type and year of graduation
Total mathematics credits to curriculum type and year of graduation
Highest math level obtained to curriculum type and year of graduation
Total science to curriculum type and year of graduation
Highest science level to curriculum type and year of graduation
Repeating high school to curriculum type and year of graduation
Curriculum tract to curriculum and year of graduation

Question 3: What are the vocational experiences of the population and what are their effects for the sample years 1982, 1985 and 1988 for the following variables?

Career information concerning vocational education to curriculum and year of graduation
Reasons for not attending vocational education to curriculum and year of graduation
Continuing education to curriculum and year of graduation
What should be changed in the vocational program

Question 4: What are the post-secondary education and experiences of the population and what are their effects for the sample years 1982, 1985 and 1988 for the following variables?

Current status to curriculum and year of graduation
Type of employment to curriculum and year of graduation
Full-time employment rate to curriculum and year of graduation
Average salary to curriculum and year of graduation
Attendance in post-secondary education to curriculum and year of graduation
Type of post-secondary education to curriculum and year of graduation

IV. Methodology

The need to plan was critical to the immense research undertaking performed in this study. The nature of this study prompted the need to be as precise and thorough as possible to guarantee the most accurate and reliable data collection.

This study involved two counties with a total initial sampling of 15,245 individuals. The collection of data was a two-part sequence due to the information required. The utilization of the vocational schools in the two counties limited the expense. The Business Data Processing secondary program class at Willow Street Vo-Tech School, Lancaster County, was utilized to enter the name and addresses of each individual. The project proved to be an excellent learning experience for the students.

Numerous planning sessions were utilized to establish the parameters of this study. The Pennsylvania Department of Education required specific objectives that needed to be met. The local funding agency also listed specific objectives that would identify long range planning goals and the future of vocational education with Lancaster and Lebanon counties.

The following sequence of methodology was conducted to obtain a valid reliable amount of data from the respondents.

Process of Receiving and Evaluating Information

1. State objectives of the study to the superintendents of the sending schools and gain support from each individual district.
2. Construct committee to advise and oversee research study.
3. Obtain names and addresses of all completers from each school district for graduation years 1982, 1985 and 1988.
4. Create a coding system to identify initial information on each individual (See appendix)
5. Enter each individual's name and address to a database according to county, school district and year of graduation.
6. Generate mailing labels for each individual and prepare envelopes for mailing of questionnaire survey.
7. Develop questionnaire utilizing input from advisory committee, requirements of Pennsylvania Department of Education and consultants.
8. Field test questionnaire utilizing adult vocational students who are not high school graduates from the years 1982, 1985 or 1988. Seventy-eight adult students participated in the field test. From their results and input revisions were needed to the questionnaire and a second field test was performed. This aspect reinforced the premise that the questionnaire was as understandable as possible.

9. Mail questionnaires to all completers in Lancaster and Lebanon counties for the years 1982, 1985 and 1988.
10. Prepare transcript collection process and conduct orientation for all research assistants involved with the transcript data collection. (See appendix)
11. Upon receipt of returned questionnaires construct files according to school district and year of graduation.
12. Contact each school district and establish dates and times when transcript data collection could be performed.
13. Establish data base with consultant at Millersville University and arrange input of data collection from both portions of the project. (i.e. questionnaire and transcript data.)
14. Process data and perform correlations of variables according to curriculum type and year of graduation with specific variables. (See appendix)
15. Review findings and analyze data to address specific significant findings for the study.
16. Generate data printouts of research findings for each county and each school district within each county.

Survey Instrument

The survey instrument developed for this study included the necessary variables required by the Department of Education and additional variables of the local agency. The instrument was streamlined to include all necessary information on one 8 1/2 x 11 sheet with questions on the front and back. The transcript information was also recorded on the same document to lessen the chance of inaccurate data collection. (See appendix 5)

Prior to the mailing of the questionnaire survey, the instrument was field tested. The field testing was utilized to guarantee that the information being requested was not misleading or unclear. Two field tests were performed and rewrites were conducted after each field test. Adult vocational students were the sampling groups utilized in both field tests. These individuals were screened and any individual that graduated from high school in Lancaster or Lebanon counties in 1982, 1985 or 1988 were not included in the field tests.

Questionnaire Collection Process

The study developed a system to perform the mailing of the questionnaire survey to all of the individuals who graduated from Lancaster County and Lebanon County high schools for the years 1982, 1985, and 1988. Each individual was identified according to county school district and year of graduation. This system also provided the means to review the transcript data for the specific individuals. The following seven digit coding system was utilized for each mailed questionnaire:

Digit 1	County	1	Lancaster
		2	Lebanon
Digits 2 and 3	School District		
Digits 4,5 and 6	Student number according to obtained graduate list.		
Digit 7	Year of Graduation	2	1982
		5	1985
		8	1988

A graduate list was obtained from each public school district in Lancaster and Lebanon counties. Each individual's name and address was entered into the computer and numbered. When returned the questionnaires were grouped according to school district and year of graduation. From that point, the research assistants began the transcript collection process.

Transcript Collection Process

The transcript collection process was performed on all individuals who responded to the mailed questionnaire survey instrument. Due to the multitude of the initial mailing within both counties this study was unable to review the transcript data of all 15,245 individuals in the initial sampling group. Transcript collection on this study was performed on 4,792 individuals from the 22 public school districts in Lancaster and Lebanon counties.

The process for transcript data collection was performed by vocational counselors and research assistants. All of the individuals involved in the collection process attended an orientation which defined the specific variables needed. The orientation was critical to guarantee an identical collection processes in all school districts and to lessen the chance of human error.

The collection process utilized a coding system. Ten specific items needed to be collected from each individual's high school permanent record (i.e. transcript).

These items included:

- gender
- status - either as a handicapped student whose file include an IEP or other
- high school curriculum - determined as academic, general, AVTS or home school vocational
- GPA based on a 12 point scale - a D- was rated as 1 point and an A+ was rated as 12 points
- total credits obtained in grades 10, 11 and 12, including vocational and non-vocational credits

- total vocational credits received in grades 10, 11 and 12, including credits at the home school and the AVTS which were taught by vocationally certified teachers. Courses taught in business education, agriculture, industrial arts, vocational home economics would be considered vocational.
- total math credits, not including accounting or business math
- highest level math credit obtained, ranging from general math to trigonometry and advanced math
- total science credits
- highest level science credit obtained, ranging from general science through chemistry, physics and advanced science.

The data collected was tallied on the bottom of the respondent's questionnaire survey. This aspect was utilized to assure that the transcript data was collected for each individual who responded to the questionnaire survey and that the transcript data would be accurately recorded. The coding system developed for this study made data collection as accurate and as expedient as possible. (See appendix)

V. Results, Findings and Recommendations

Initial Considerations

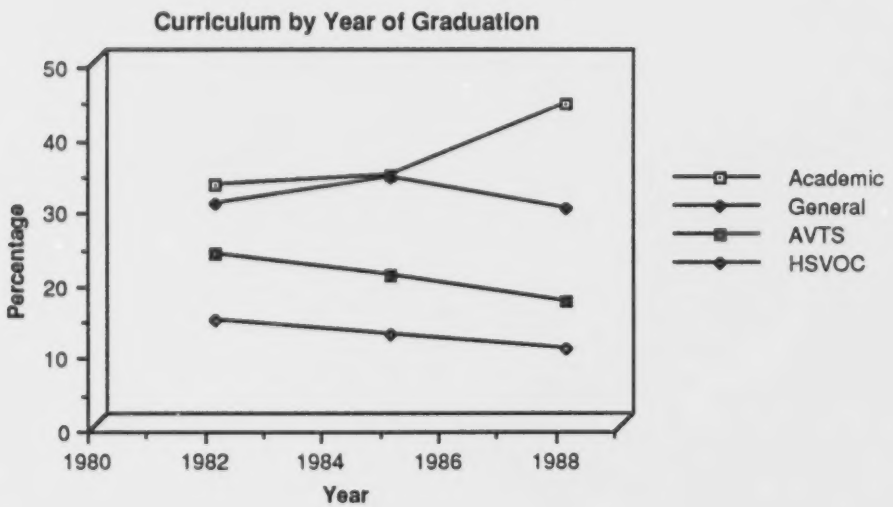
When viewing the findings of this study it was critical to consider the following general results from the individuals that responded to the survey.

1. Of the total respondents, 98% were white, .5% were black, and 1.5% were of other races. This result is not indicative of the two county population. The intent to obtain responses from a greater minority population was not achieved.
2. The proportion with respect to gender is favorable and typifies the two counties with 55% of the respondents being female and 45% being male.
3. Although the overall population in both counties has increased between 1980 and 1990,

   Lancaster County 16.2%

   Lebanon County 5.9%

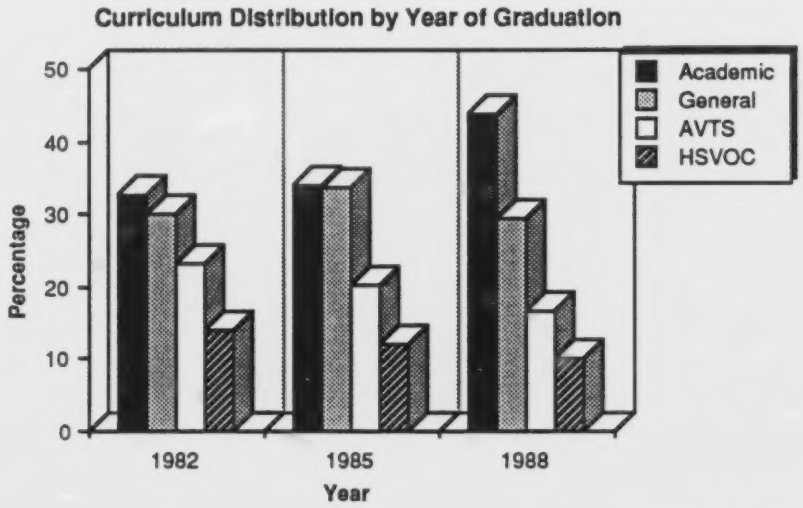
   the population of high school graduates from 1982 to 1988 has declined 9%.
4. The sampling of respondents according to curriculum type was predominantly equal. The AVTS and HSVOC students were at times combined as vocational students. This was necessary when viewing differences between academic, general, and vocational students. Where applicable to the findings, this group of AVTS and HSVOC was separated.
5. The findings of this study have been based in many correlations to the year of graduation and curriculum type of individuals. This aspect will give indications of numerous changes over a period of time which will reflect economic and educational changes from 1982 to 1988 within the two counties.



Questionnaire Data Findings and Recommendations

1. SURVEY POPULATION

Students that responded to the survey show a dramatic shift with respect to curriculum type. From 1982 to 1988, the study showed a ten percent shift of students pursuing the academic tract of curriculum. This shift to the academic tract parallels an increase in requirements for graduation. More significant is that a 10 percent shift toward the academic tract was at the expense of the AVTS system. This further supports the need by the vocational school to integrate more academic based courses for the vocational students in the future. The implementation of English, math and science should be considered whether taught at the home school or at the vocational school.



2. MINORITY STUDENTS

When viewing the individuals that responded to the survey with respect to minority populations, an overwhelming amount attended the A.V.T.S. This finding shows the need to supply additional considerations for this population that will provide the individuals with salable skills upon graduation.

TABLE 3.1 - HIGH SCHOOL CURRICULUM BY RACE (%)

Curriculum	White	Black	Hispanic	Asian	Am. Indian	Total
Academic	39.70	0.09	0.14	0.41	0.02	40.36
General	31.45	0.34	0.32	0.34	0.00	32.45
AVTS	14.71	0.00	0.07	0.11	0.02	14.91
HSVOC	12.11	0.05	0.05	0.07	0.00	12.27

3. SPECIAL NEEDS STUDENTS

Although the number of identified handicapped students that responded to the survey was minimal. The greatest concentration of these individuals were completers of the AVTS curriculum. This finding supports the need to continue to offer training that accommodates the individual entering the AVTS. Support services, remediation and other forms of assistance for these individuals and the instructors at the vocational schools should be considered.

TABLE 4.1 - Distributionof Handicapped Respondents by Curriculum Type (%)

	Academic	General	AVTS	HSVOC	Total
Handicapped	0.07	0.27	0.41	0.18	0.93
Other	40.25	32.20	14.55	12.07	99.07

4. SAMPLING OF CURRICULUM AND GENDER

The results obtained in this study are rather equal with respect to curriculum types. Overall female graduates had a higher response rate, but similar to other studies. The male populations were greater in the vocational curricula which parallels state findings. The need to increase career awareness to females should be considered regardless of the curriculum tract of the individual.

TABLE 2.1 - Gender Distributions by Curriculum Type and Year of Graduation (f and %)

		Male	Female	Total
	Academic	192	259	451
		31.02	34.26	
	General	161	253	414
		26.01	33.47	
1982	AVTS	209	110	319
		33.76	14.55	
	HSVOC	57	134	191
		9.21	17.72	
	Total	619	756	1375
	Academic	225	312	537
		29.92	37.82	
	General	241	289	530
		32.05	35.03	
1985	AVTS	217	103	320
		28.86	12.48	
	HSVOC	69	121	190
		9.18	14.67	
	Total	752	825	1577
	Academic	322	481	803
		40.25	26.25	
	General	222	320	542
		27.75	30.77	
1988	AVTS	193	114	307
		24.13	10.96	
	HSVOC	63	125	188
		7.88	12.02	
	Total	800	1040	1840

5. INTEREST IN FURTHER TRAINING

Of the 1982 graduates, 34% were interested in further training, as were 37% of the 1985 graduates and 29% of the 1988 graduates. Many of the 1988 graduates were pursuing post-secondary training currently. The response from the graduates suggests that the vocational school continue to offer multiple and varied adult education courses to accommodate the needs of individuals who are advancing their skills due to a company or occupational need.

TABLE 18.1 - Are You Interested in Further Training? (%)

	Academic	General	AVTS	HS Voc	Total
YES	27.77	23.41	10.67	8.16	70.01
NO	7.02	9.56	7.57	5.85	29.99

6. REPEATING THE HIGH SCHOOL EXPERIENCE

When questioned to have the option to repeat high school what curriculum would you choose.....76% were satisfied with their initial choice. Of the 24% who would change if given the opportunity, 19% would have pursued the academic tract and 5% would have chosen the AVTS. That 5% of the respondents who would modify their high school experience to include the AVTS translates to an increase of 238 students, which would place the vocational schools near capacity enrollment.

From the individuals who expressed an interest to repeat their high school experience, 50% of the general students would opt to take a college program, and 28% of these individuals would have chosen the AVTS tract. 40% of the AVTS students would have chosen the college tract and 32% would have chosen a different AVTS program. 20% of the academic students would have chosen a business education program or the AVTS. 50% of the home school vocational students would have taken the college tract and 25% would have taken the AVTS program, instead of the HSVOC. It is obvious that the general students were not satisfied with the general experience. These findings also parallel the data that shows a movement for more students pursuing an academic tract in the 1988 statistics.

TABLE 15.1 - Curriculum Tract Respondents Would Select If Repeating High School (f and %)

	Academic	General	AVTS	HSVOC	Total
College	91	257	155	103	606
	52.00	53.88	42.01	53.93	
General	11	15	15	2	43
	6.29	3.14	4.07	1.05	
Different Vo-Tech	1	8	127	6	142
	0.57	1.68	34.42	3.14	
Business/Agriculture	38	59	48	30	175
	21.71	12.37	13.01	15.71	
Vo-Tech	34	138	24	50	246
	19.43	28.93	6.50	26.18	
Total	175	477	369	191	1212

See tables 15.2, 15.3, and 15.4 in appendix for responses by year of graduation.

7. INFORMATION ABOUT VO-TECH

From the respondents, 73% of the individuals had received information about vo-tech. From the years 1982 to 1988, this percentage increased even though the total number of graduates declined during this period. This indicates that administrative and counselor efforts had created a greater awareness of vocational opportunities from 1982 to 1988.

TABLE 16.1 - "Did you receive information about Vo-Tech?" by curriculum (%)

	Academic	General	AVTS	HS Voc	Total
YES	33.66	27.21	14.42	10.56	85.86
NO	6.73	5.14	0.60	1.68	14.14

TABLE 16.2 - "Did you receive information about Vo-Tech?" by year (%)

	1982	1985	1988	Total
YES	22.22	27.02	36.65	85.89
NO	5.74	4.85	3.53	14.11

8. CHOICE NOT TO ATTEND VO-TECH/POST-SECONDARY OPTIONS

From 1982 to 1988, students that responded selected college as the significant reason not to have attended vocational education. An increase of 12% displays the obvious and resounding trend of students into the college-preparatory tract. The greatest frequency of academic and general students also indicated that a four-year university was the first school attended after graduation - as opposed to other forms of post-secondary training. Furthermore, the greatest response for their status in regard to the first school attended after graduation was that the majority of the individuals either completed or are full-time students. Only 8% of the general and academic students did not complete their post-secondary training. This percentage is of the total population of respondents. This again supports the need to integrate academics into the vocational school.

TABLE 17.1 - Reason for not attending Vo-Tech by curriculum (%)

	Academic	General	AVTS	HS Voc	Total
Bus Ride	0.00	0.11	0.03	0.03	0.17
Peers	0.55	1.30	0.14	0.41	2.40
Extra-curricular act.	1.22	2.87	0.14	1.44	5.66
Schedule	0.22	1.22	0.08	0.97	2.49
Credits for grad.	0.44	1.80	0.06	0.50	2.79
Parents	0.39	0.94	0.06	0.19	1.57
College	41.30	18.76	0.86	3.15	64.06
Voc program	0.97	2.51	0.14	2.27	5.88
Other	2.60	7.57	0.28	4.53	14.97

TABLE 17.2 - Reason for not atending Vo-Tech by year (%)

	1982	1985	1988	Total
Bus Ride	0.00	0.08	0.08	0.16
Peers	0.71	0.99	0.74	2.44
Extra-curricular act.	1.75	1.78	2.16	5.70
Schedule	0.79	0.96	0.77	2.52
Credits for grad.	0.71	0.96	1.12	2.79
Parents	0.30	0.66	0.60	1.56
College	15.47	19.33	19.19	63.99
Voc program	1.97	2.11	1.78	5.86
Other	4.96	4.65	5.37	14.98

9. MOBILITY

Over 80% of the respondents have not moved from the county in which they graduated. Of all of the respondents, only 9% had moved from Pennsylvania. Due to employment and current statistics, this trend is expected to continue for the counties.

TABLE 6.1 - Mobility status since graduation (f and %)

	Academic	General	AVTS	HSVOC	Total
No change	1061	799	444	305	2609
	59.47	53.91	47.13	53.98	
Within county	295	449	369	210	1323
	16.54	30.30	39.17	37.17	
Out of County	179	121	56	25	381
	10.03	8.16	5.94	4.42	
Out of Pennsylvania	249	113	73	25	460
	13.96	7.62	7.75	4.42	
Total	1784	1482	942	565	4773

See tables 6.2, 6.3, and 6.4 in appendix for responses by year of graduation.

10. SALARY

The data received indicates that the academic and vocational students are receiving approximately $20 more per week than general and high school vocational students. Obviously, more general and high school vocational students need to consider career options available through academic or vocational training.

TABLE 22.1 - Average Weekly Salary by Curriculum

Curriculum	Average Salary
Academic	$344.89
General	323.69
AVTS	344.13
HSVOC	325.59

TABLE 22.2 - Average Weekly Salary by Year

Year	Average Salary
1982	$407.40
1985	346.78
1988	232.21

See tables 22.3, 22.4, and 22.5 in appendix for salary by type of work and year of graduation.

11. CURRENT WORK EXPERIENCE

Seventy-six percent of the respondents for 1982 are working full-time. The next greatest frequency, 5%, of individuals reported that they are homemakers. For 1985 graduates, 71% of the respondents are working full-time with the next greatest percentage of 13% engaged as full-time students. The respondents from the class of 1988 indicated the greatest frequencies as 56% full-time students and 30% working full-time. These percentages parallel the statistics that identified student intent after graduation.

See tables 19.1, 19.2 and 19.3 in the appendix for responses by year of graduation.

12. PARENTS' EDUCATION

From the group of respondents, the greatest percentage of parents possessed a high school education: 43% of fathers, 53% of mothers. The second greatest frequency for the father's education was equally divided between less than 12 years of education and 13 to 16 years of education. The second highest frequency for mothers were individuals with 13 to 16 years of education. This comparison was true throughout all curriculums.

TABLE 5.1 - Father's Education by H.S. Curriculum (%)

	Academic	General	AVTS	HS Voc	Total
Less than 12 yrs	4.85	8.02	5.66	4.08	22.61
12 years	15.63	13.47	6.93	6.12	42.16
13-16 years	12.66	7.44	1.79	1.55	23.45
17 or more years	7.54	3.36	0.49	0.39	11.78

TABLE 5.2 - Mother's Education by H.S. Curriculum (%)

	Academic	General	AVTS	HS Voc	Total
Less than 12 yrs	3.04	6.04	4.36	2.67	16.12
12 years	20.06	16.97	8.74	7.54	53.31
13-16 years	13.83	7.70	1.54	1.75	24.83
17 or more years	3.44	1.78	0.30	0.23	5.74

13. VOCATIONAL STUDENTS PURSUING RELATED FIELDS

Sixty-six percent of the vocational students that responded did pursue their first job in a related field. Twenty percent also pursued a related field through post-secondary education at a trade school or two year business school or community college. A total of 86 percent of vocational students remained in their field of study. This is a combined finding of Lancaster and Lebanon County students. It should be noted that the Lebanon County percentage was slightly lower which reduced the overall related field pursued upon graduation.

Transcript Data Findings and Recommendations

This section of results related directly to the respondents and their accomplishments of math, science, and vocational credits. Findings involving total credits and the highest levels of math and science achieved will also be recognized.

1. TOTAL CREDITS

The total credits data for the respondents was based on the high school grades 10, 11, and 12. In cases where a district utilized ninth grade credits, the amount of credits accrued for that grade were subtracted from the total credits earned.

The greatest percentage, 32%, of the 1982 graduates received 17 to 18 credits. In 1985 this increased to 18 to 19 credits, and in 1988 the greatest frequency occurred for students receiving 19 to 20 credits. The indication was that more students were obtaining a greater number of credits. This analysis could be related to Chapter 5 requirements, but the graduates of 1988 were not required by state law to obtain the 21 credit requirement. The indication that school districts were adjusting credit requirements seems evident with this increase.

TABLE 8.1 - Total Credits by Curriculum Type and Year of Gradaution

	1982			1985			1988		
	N	MEAN	SD	N	MEAN	SD	N	MEAN	SD
Academic	451	18.54	2.92	533	19.55	2.79	803	19.84	2.13
General	414	18.15	2.96	528	19.75	3.28	541	19.30	3.20
AVTS	318	17.47	2.17	317	18.87	2.72	306	19.15	1.96
HSVOC	190	18.44	2.06	190	19.18	2.73	186	19.30	2.63

2. VOCATIONAL CREDITS

Although total credits increased from 1982 to 1988, many graduates did not obtain any vocational credits. In 1982, 25% of the respondents did not receive a vocational credit. This percentage increased to 32% in 1988. To further support this premise, 20% of the academic students and 20% of the general students did not receive any vocational credits. The indication is that many of these groups of individuals could possibly benefit from exposure to vocational courses either at the AVTS or home school. Most vocational students (AVTS and HSVOC) received either 6 or 9 vocational credits. This amount of total vocational credits is obvious due to the content area and curriculum of the individuals.

TABLE 9.1 - Total Vocational Credits by Curriculum Type and Year of Gradaution

	1982			1985			1988		
	N	MEAN	SD	N	MEAN	SD	N	MEAN	SD
Academic	438	0.86	1.16	524	0.93	1.25	786	0.71	1.11
General 413	1.69	1.50	530	2.01	1.84	541	1.94	1.59	
AVTS	319	7.54	2.19	320	7.86	1.97	307	7.37	2.21
HSVOC	191	5.70	2.34	190	6.11	1.83	188	5.82	2.02

TABLE 9.2 - Total Vocational Credits by Year of Graduation (%)

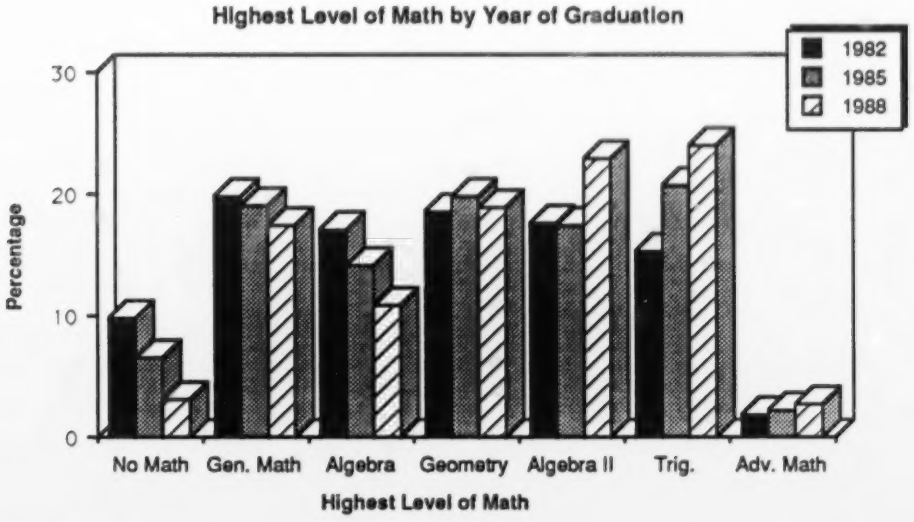
	1982	1985	1989
0-1	41.29	40.98	49.59
2-3	20.13	19.82	19.80
4-5	8.96	10.42	9.16
6 and more	29.61	28.77	21.45

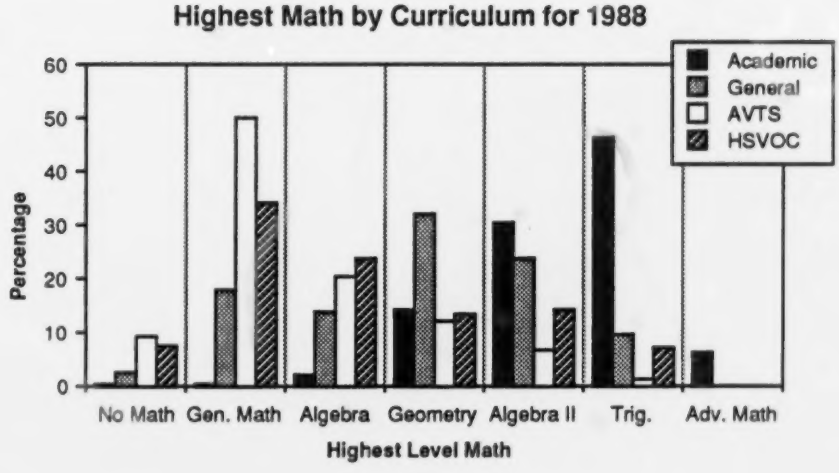
3. MATH CREDITS

In 1982 and 1985, the largest percentage and frequency of students received 1 and 2 credits of math. In 1988 the number increased to 2 to 3 credits. This slight increase could be contributed to the increased graduation requirements. Furthermore, the most common highest level of math in 1982 was geometry. The highest frequency level increased to trigonometry in 1985 and 1988 Most of the vocational students did not achieve a math level higher than general math. The academic students had the greatest percentage of math to the level of trigonometry. General students had reached the geometry level which was two levels higher than the AVTS or HSVOC students.

TABLE 10.1 - Total Math Credits by Curriculum Type and Year of Gradaution

	1982			1985			1988		
	N	MEAN	SD	N	MEAN	SD	N	MEAN	SD
Academic	451	3.00	0.85	537	3.10	0.83	803	3.06	0.77
General 414	1.70	0.93	530	1.82	0.96	542	2.10	0.94	
AVTS	319	1.10	0.82	320	1.14	0.72	307	1.41	0.84
HSVOC	191	1.15	0.89	190	1.37	0.83	188	1.55	0.94



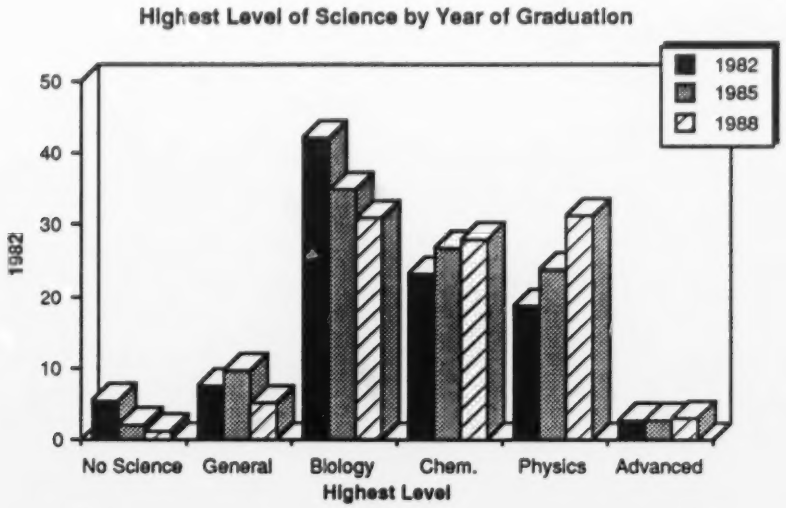


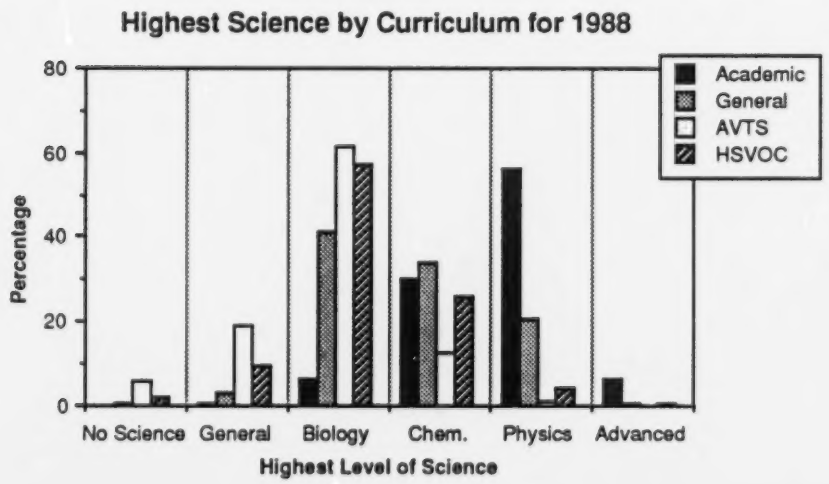
4. SCIENCE CREDITS

The academic group's greatest percentage of total science was 3 credits. General students received 2 credits and AVTS and HSVOC students obtained 1 credit. During 1982 and 1985 the total science credits were between 1 and 2 credits. In 1988 this number increased to 3 credits with the greatest percentage. When compared to curriculum types the most frequent percentage of academic students advanced to the physics level in science. Biology courses gained the greatest frequency for the other three groups.

TABLE 12.1 - Total Science Credits by Curriculum Type and Year of Gradaution

	1982			1985			1988		
	N	MEAN	SD	N	MEAN	SD	N	MEAN	SD
Academic	451	2.99	0.99	537	3.17	0.97	803	3.08	0.86
General	414	1.66	0.93	530	1.84	0.83	542	1.90	0.79
AVTS	319	1.15	0.67	320	1.06	0.63	307	1.30	0.68
HSVOC	191	1.21	0.70	190	1.45	0.72	187	1.48	0.70





5. MATH AND SCIENCE OBSERVATION

Although by the year 1988 many students have reached a higher number of total math and science credits, the level or degree of difficulty for vocational students has not increased nor has the total number of credits received increased. It seems to indicate that the vocational students, both AVTS and HSVOC, need more of the academics.

6. GRADE POINT AVERAGE

The significant indicators are that AVTS and home school vocational students are experiencing lower G.P.A.'s than general and academic students. This again supports the critical need to integrate academic and vocational theory.

TABLE 7.1 - Cummulative G.P.A. by High School Curriculum (%)

G.P.A.	Academic	General	AVTS	HS Voc	Total
D-	3	33	20	2	58
	0.06	0.69	0.42	0.04	
D	6	65	47	17	135
	0.13	1.36	0.98	0.36	
D+	18	95	62	30	205
	0.38	1.99	1.30	0.63	
C-	69	176	155	74	474
	1.45	3.69	3.25	1.55	
C	116	177	151	68	512
	2.43	3.71	3.16	1.42	
C+	156	199	164	98	617
	3.27	4.17	3.44	2.05	
B-	190	171	110	83	554
	3.98	3.58	2.31	1.74	
B	338	290	141	101	870
	7.08	6.08	2.95	2.12	
B+	236	94	47	42	419
	4.95	1.97	0.98	0.88	
A-	264	107	22	28	284
	5.53	2.24	0.46	0.59	
A	205	48	13	18	284
	4.30	1.01	0.27	0.38	
A+	187	28	3	5	223
	3.92	0.59	0.06	0.10	

VI. Summary and Discussion

The research study provided a multitude of information concerning past graduates of Lancaster and Lebanon counties' public school districts.

The data received is of great value to the vocational schools and also contains critical data for each of the public high schools. The future of education, vocational and academic, is currently the priority topic at the local, state and national levels. This study can assist in long range planning strategies as well as determine alterative avenues to address specific concerns of education.

The resounding significant factors that appear for the data of this study will be highlighted. Recommendations will be provided. Additional options must be pursued if changes within our progressive educational system are to occur.

The following considerations are the results derived from the study.

1. The need to institute an integration of academic and vocational education. This could be in the form of applied academics taught at the home school, the vocational school or in both institutions.

2. The need to increase advanced placement options to students. These options should be made available to all students and agreements between post-secondary institutions should be more aggressive.

3. Public relations and availability of information concerning vocational program must continue. The improvement in exposure of the vocational schools has increased since 1982. This is in direct support of the efforts of the Pupil Personnel Services department of the vocational school.

4. The need to be aware of the vocational students lack of academics. The need to institute more math and science requirements for these students in critical. Tech Prep is one option, but other avenues or resources must be considered.

5. The G.P.A. of the vocational student is approximately .5 level lower than the general curriculum student. This again supports the need to integrate academic and vocational or other not yet explored options.

6. The need to address the general curriculum student. This individuals seems to be maintaining a status quo from 1982-1988. He/she has produced a higher G.P.A. and achieved a higher math and science level than the vocational student, but has not obtained the employment level or salary of the vocational or academic student. The possibility of more career education or a more defined education tract could be an option to consider. Other suggestions need to be considered for this population.

7. The need to attempt to address the minority population of the counties. This study produced a significantly low response from this population. The reason why is not clear, but it is obvious that the population did not respond to the survey. Additional avenues to address these individuals must be considered.

8. The need to improve the vocational curriculum should be considered. The vocational schools have made dramatic efforts with respect to equipment, facilities and instructor preparation. The final aspect, the improvement of curriculum and its delivery, must be addressed and discussed.

9. Adult training in the form of evening courses should continue. A significant percentage of individuals expressed the value of these offerings. The community awareness is evident from the graduates surveyed.

10. The need for sending schools and the vocational schools to continue to offer options of post-secondary institutions. Many of the graduates completed their schooling or trianing. This finding acknowledges the efforts of the individuals involved.

11. The need to keep attune to the economy of the two counties is significant. Currently, over 70 percent of the individuals surveyed remain within the county. the employment availability of the counties is favorable and there does not seem to be indicators that this will change. The efforts of the districts and the vocational schools must remain cognizant to the status of the employment base.

Appendix

Survey Instruments

GRADUATE RESEARCH SURVEY

Computer Number

SECTION 1: GENERAL INFORMATION

YEAR OF GRADUATION: _____ 1982 _____ 1985 _____ 1988

1. Marital Status: (check one)
   _____ Single _____ Married _____ Separated/Divorced
2. Race: (check one)
   _____ White (not Hispanic) _____ Asian or Pacific Islander
   _____ Black (not Hispanic) _____ American Indian or Alaska Native
   _____ Hispanic
3. Since graduation from high school, has your permanent residence changed?
   _____ No
   _____ Yes, I now live within the county
   _____ Yes, I now live out of the county, but within Pennsylvania
   _____ Yes, I now live out of Pennsylvania
4. How many years of education did your parents have? (High School = 12 years)
   Father: _____ Less than 12 _____ 12 _____ 13-16 _____ 17 or more
   Mother: _____ Less than 12 _____ 12 _____ 13-16 _____ 17 or more
5. Which of the following are you currently doing?(check one)
   _____ Working full-time (35 hours or more per week), not a student
   _____ Working full-time, plus a part-time job
   _____ Working part-time, not a student, not seeking full-time work
   _____ Working part-time, not a student, seeking full-time work
   _____ Working - self-employed
   _____ Full-time student
   _____ Full-time student, working part-time
   _____ In the armed forces
   _____ Homemaker
   _____ Unable to work due to health problems
   _____ Unemployed, but looking for work
   _____ Unemployed, not looking for work
   _____ Other

SECTION II: HIGH SCHOOL EXPERIENCE

6. If you could repeat high school again, would you take a different program?
   _____ Yes _____ No
   If yes, which one?
   _____ College Program _____ General Program _____ Different Vo-Tech Program
   _____ Business Ed/Agriculture Ed (Home School) _____ Vocational Program (Vo-Tech)
7. Did you receive information while in High School concerning opportunities at the Vo-Tech School?
   _____ Yes _____ No
8. If you did not attend the Vo-Tech School, check the one answer that is most appropriate:
   _____ Bus ride too long
   _____ Peer influence
   _____ Extra-curricular Activities
   _____ Scheduling difficulties
   _____ Needed to fulfill credit requirements for graduation
   _____ Parents did not approve
   _____ Planned to attend college
   _____ Vocational program of interest was not offered
   _____ Other

SURVEY CONTINUED ON OTHER SIDE

OFFICE USE ONLY

1	2	3	4	5	6	7	8	9	10

SECTION III: EDUCATION SINCE HIGH SCHOOL

9. Have you attended any type of school, since you graduated from high school? (check one)
_____ Yes (Go to question 10) _____ No (Go to question 13)

10. Check the type of school you first attended after graduation:
_____ Business, Technical or Trade School
_____ Community College
_____ 2-year program at a University Branch Campus
_____ 4-year program at a University (including branch campuses)
_____ Other

11. What is your status in the program checked above? (check one)
_____ Completed
_____ Presently enrolled full-time
_____ Presently enrolled part-time
_____ No longer attending

12. How many years of post-high school education have you completed?
_____ 1 _____ 2 _____ 3 _____ 4 _____ 5 or more

SECTION IV: FULL-TIME EMPLOYMENT SINCE GRADUATING FROM HIGH SCHOOL

13. How many different full-time jobs have you had since graduating or completing school after graduation? _____

• • • • • • • • • • • • • • *THE FOLLOWING QUESTIONS ARE ABOUT YOUR PRESENT JOB.* • • • • • • • • • • • • •

14. What is the title of your job? (example: nurse, carpenter, clerk, waiter)_____

15. What type of work does your employer do? (check one)
_____ Manufacturing - making products to sell
_____ Construction - build/repair/service buildings (i.e. carpentry, plumbing, electrical)
_____ Services - banking, insurance, phone company
_____ Food Service
_____ Transportation - truck driver, auto repair
_____ Farming - agriculture related jobs, landscape
_____ Health Occupations
_____ Public Sector - education, state/local government, etc.
_____ Other

16. Please write in the amount of salary of your present job before any deductions. Do not include overtime.
$_____ earned per: (check one) _____ Hour _____ Week _____ Every two weeks
_____ Month _____ Year
I work _____ hours per week.

17. Are you interested in further training or education?
_____ Yes _____ No
If yes, please check the most appropriate area:
_____ 2-year associate program
_____ 4-year degree program
_____ Job specific training
_____ Other
If yes above, please list specific area(s) of interest/study:_____

SECTION V: VOCATIONAL EXPERIENCE

Complete this section if you attended a vocational program during High School.

18. If you completed a vocational training program, was your first job after graduation related to your trade?
_____ Yes _____ No
Vocational Program: _____

19. What portion of your vocational program do you feel needs improvement: (check one)
_____ Curriculum Materials (i.e. content of the course)
_____ Equipment
_____ Instructor
_____ Facility
_____ None/Other

Appendix

List of Variables

NOTES FROM MEETING WITH:
DR. GREY, PSU AND PROFESSOR CHALID, MILLERSVILLE UNIVERSITY

I. TRANSCRIPT DATA

Variables

Box Numbers #1) Gender M, F, to Curriculum Type

a. Male or Female
b. Curriculum Type -
Academic
General
Vocational AVTS
Home School Vocational

#2) Handicapped to Curriculum Type

#3) Curriculum Type to Year and Sex and Race
Example: 82 85 88
Academic
General
Voc. AVTS
Home School Voc.

also include sex and [illegible]

#4) GPA by Curriculum Type and by Year
GPA by Race
GPA by Gender

#5) Total Credits by Curriculum Type
Sex
Race
Year

#6) Total Vocational Credits by Curriculum Type and Year

#7) Total Math Credits by Curriculum Type and Year

#8) Highest Level Math by Curriculum Type and Year

#9) Total Science Credits by Curriculum Type and Year

#10) Highest Science Credit by Curriculum Type and Year

Critical Data from Transcript Data:

A. Movement of Students in a Curriculum
B. Total Vocational Credits in a Curriculum

II. SURVEY DATA

Question

#1) Marital Status to Curriculum Type and Year

#2) Race to Curriculum Type and Year

#3) Mobility: Survey List to Curriculum Type and Year

#4) Socio-Economic Status Example:
Curriculum Type for a) Father b) Mother c) Total
Run Separately and Total by Year and Curriculum Type

#5) Cross Tabulation - Page 47 of Study

List Variables	Curriculum Type				
	Academic	General	AVTS	HS	Voc

#6) Compare Yes Responses to Curriculum Type and Survey Selections

#7) Frequency Distribution of Yes and No to Curriculum Type and Year

#8) Survey Selections to Curriculum Type and Year

#9) Frequency Distribution for Yes and No to Curriculum Type and Year and Curriculum Type for Yes Responses Page 51

#10, #11)
Curriculum Type and Survey List of #10
Curriculum Type and Survey List of #11 52
and Question #11 and Question #10

#11) to Question #8 Statement "Plan to Attend College"

#12) Question #12 by Year to Curriculum Type
Race, Gender Page 51

#13) Curriculum Type and by Year

#14) List Responses and Frequency ? ?

#15) Curriculum Type and Year Similar to Table on Page 47

#16) Compute Salary to Weekly and then Compare to Curriculum Type, year and GPA, Pages 55 and 56

#17) To Year and Curriculum Type and List Options for Yes Responses

#18) Vocational Program Name and Yes and No

#19) Vocational Program and Listed Options (If Possible)

Appendix

Transcript Collection

To: Guidance Counselors
From: Michael Lucas
Subject: Research Survey Transcript Information

The following information is required for the returned surveys of past graduates form the years 1982, 85, 88. This information should be recorded on the front side of the survey. It is critical that the obtained information correspond to the correct individuals' transcript data.

Box number

1. Sex: 1 for male; 2 for female

2. Status: 1 for handicapped,student has IEP;
2 for all others.

3. High School Curriculum: This is determined according to H.S. standards.
1 for Academic
2 for General
3 for Vocational AVTS
4 for Vocational Home School

4. GPA: The cumulative grade point average for grades 10, 11, and 12 must be converted to a 12 point scale. Assign a numerical value based on the following chart depending on the letter grade equivalent of a student's cumulative GPA. (according to H.S.)

1	2	3	4	5	6	7	8	9	10	11	12
D-	D	D+	C-	C	C+	B-	B	B+	A-	A	A+

5. Total Credits obtained 10th to 12th: (include vocational and non-vocational)

6. Total Vocational Credits: Total vocational credits received in grades 10th to 12th. This will include vocational courses at the vo-tech and in the home school. Vocational credit is counted if taught by vocationally certified teachers. This will include courses taught in business ed. agriculture, and vocational home economics and AVTS courses.

7. Total Math Credits: Insert number for total. (not including accounting or business math).

8. Highest Math Credit Obtained:
1 for General Math
2 for Algebra
3 for Geometry
4 for Algebra II
5 for Trig-senior college math
6 for Advanced Math university credit.

NOTE: If a student takes more than one general math course, still record 1.

9. Total Science Credits: Insert number for total.

10. Highest Science Credit Obtained:

NOTE: If a student takes more than one general science course, still record 1.

1 for General Science
2 for Biology
3 for Chemistry
4 for Physics
5 for Advanced Science university credit

Appendix

Additional Tables and Charts

CHART 1.1

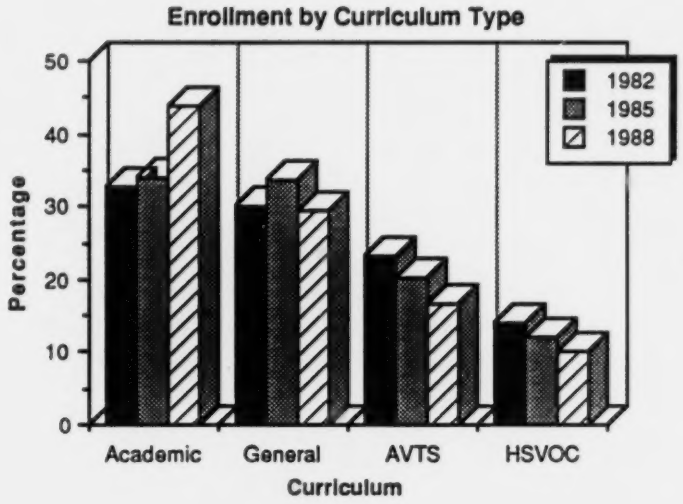


TABLE 6.2 - Mobility status since graduation for year 1982
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
No change	94	89	90	50	323
	20.94	21.60	28.30	26.60	
Within county	152	210	172	112	646
	33.85	50.97	54.09	59.57	
Out of County	91	62	26	16	195
	20.27	15.05	8.18	8.51	
Out of Pennsylvania	112	51	30	10	203
	24.94	12.38	9.43	5.32	
Total	449	412	318	188	1367

TABLE 6.3 - Mobility status since graduation for year 1985
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
No change	271	267	145	99	782
	50.75	50.57	45.45	52.11	
Within county	99	176	128	74	477
	18.54	33.33	40.13	38.95	
Out of County	58	46	22	9	135
	10.86	8.71	6.90	4.74	
Out of Pennsylvania	106	39	24	8	177
	19.85	7.39	7.52	4.21	
Total	534	528	319	190	1571

TABLE 6.4 - Mobility status since graduation for year 1988
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
No change	696	443	209	156	1504
	86.89	81.73	68.52	83.42	
Within county	44	63	69	24	200
	5.49	11.62	22.62	12.83	
Out of County	30	13	8	0	51
	3.75	2.40	2.62	0.00	
Out of Pennsylvania	31	23	19	7	80
	3.87	4.24	6.23	3.74	
Total	801	542	305	187	1835

TABLE 9.3 - Total Vocational Credits by Curriculum Type for Year 1982
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
0-1	329	215	7	11	562
	75.11	52.06	2.19	5.76	
2-3	95	148	10	21	274
	21.69	35.84	3.13	10.99	
4-5	13	45	19	45	122
	2.97	10.90	5.96	23.56	
6 and more	1	5	283	114	403
	0.23	1.21	88.71	59.69	

TABLE 9.4 - Total Vocational Credits by Curriculum Type for Year 1985
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
0-1	391	245	3	2	641
	74.62	46.23	0.94	1.05	
2-3	109	181	6	14	310
	20.80	34.15	1.88	7.37	
4-5	20	77	17	49	163
	3.82	14.53	5.31	25.79	
6 and more	4	27	294	125	450
	0.76	5.09	91.88	65.79	

TABLE 9.5 - Total Vocational Credits by Curriculum Type for Year 1988
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
0-1	648	247	4	5	904
	82.44	45.66	1.30	2.66	
2-3	112	207	20	21	360
	14.25	38.26	6.51	11.17	
4-5	20	77	21	49	167
	2.54	14.23	6.84	26.06	
6 and more	6	10	262	113	391
	0.76	1.85	85.34	60.11	

TABLE 11.1 - Highest Math Level by Curriculum Type for Year 1982

FREQUENCY / PERCENT	Academic	General	AVTS	HSVOC	Total
No Math	2	36	61	36	135
	0.44	8.70	19.12	18.85	
General Math	1	72	145	54	272
	0.22	17.39	45.45	28.27	
Algebra I	16	96	64	58	234
	3.55	23.19	20.06	30.37	
Geometry	70	127	36	23	256
	15.52	30.68	11.29	12.04	
Algebra II	160	60	8	15	243
	35.48	14.49	2.51	7.85	
Trigonometry	178	23	5	5	211
	39.47	5.56	1.57	2.62	
Advanced Math	24	0	0	0	24
	5.32	0.00	0.00	0.00	

TABLE 11.2 - Highest Math Level by Curriculum Type for Year 1985

FREQUENCY / PERCENT	Academic	General	AVTS	HSVOC	Total
No Math	1	46	39	18	104
	0.19	8.68	12.23	9.47	
General Math	3	74	167	57	301
	0.56	13.96	52.35	30.00	
Algebra I	19	95	59	50	223
	3.54	17.92	18.5	26.32	
Geometry	80	163	35	35	313
	14.90	30.75	10.97	18.42	
Algebra II	148	94	12	20	274
	27.56	17.74	3.76	10.53	
Trigonometry	255	57	7	8	327
	47.49	10.75	2.19	4.21	
Advanced Math	31	1	0	2	34
	5.77	0.19	0.00	1.05	

TABLE 11.3 - Highest Math Level by Curriculum Type for Year 1988

FREQUENCY / PERCENT	Academic	General	AVTS	HSVOC	Total
No Math	2	14	28	14	58
	0.25	2.58	9.12	7.45	
General Math	4	98	154	64	320
	0.50	18.08	50.16	34.04	
Algebra I	17	75	63	45	200
	2.12	13.85	20.52	23.94	
Geometry	113	173	37	25	348
	14.07	31.92	12.05	13.30	
Algebra II	245	129	21	27	422
	30.51	23.80	6.84	14.36	
Trigonometry	372	52	4	13	441
	46.33	9.59	1.30	6.91	
Advanced Math	50	1	0	0	51
	6.23	0.18	0.00	0.00	

TABLE 13.1 - Highest Science Level by Curriculum Type for Year 1982
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
No Science	1	22	24	26	73
	0.22	5.33	8.08	13.61	
General Science	3	10	74	16	103
	0.67	2.42	24.92	8.38	
Biology 37	218	186	130	571	
	8.20	52.78	62.63	68.06	
Chemistry	182	109	10	15	316
	40.35	26.39	3.37	7.85	
Physics 195	53	3	3	254	
	43.24	12.83	1.01	1.57	
Advanced Science	33	1	0	1	35
	7.32	0.24	0.00	0.52	

TABLE 13.2 - Highest Science Level by Curriculum Type for Year 1985
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
No Science	2	7	20	7	36
	0.37	1.32	6.87	3.68	
General Science	4	26	102	18	150
	0.75	4.91	35.05	9.47	
Biology 47	229	149	115	540	
	8.77	43.21	51.20	60.53	
Chemistry	177	177	16	45	415
	30.02	33.40	5.50	23.68	
Physics 268	90	4	4	366	
	50.00	16.98	1.37	2.11	
Advanced Science	38	1	0	1	40
	7.09	0.19	0.00	0.53	

TABLE 13.3 - Highest Science Level by Curriculum Type for Year 1988
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
No Science	0	3	17	4	24
	0.00	0.55	5.61	2.14	
General Science	3	16	58	18	95
	0.37	2.95	19.14	9.63	
Biology 51	225	186	107	569	
	6.35	41.51	61.39	57.22	
Chemistry	244	183	39	49	515
	30.39	33.76	12.87	26.20	
Physics 453	113	3	8	577	
	56.41	20.85	0.99	4.28	
Advanced Science	52	2	0	1	55
	6.48	0.37	0.00	0.53	

TABLE 14.1 - Respondents who would chose a different program if repeating high school by Curriculum Type
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Yes, Different Program	164	478	372	190	1204
	9.18	32.23	39.49	33.45	
No, Same Program	1623	1005	570	378	3576
	90.82	67.77	60.51	66.55	

TABLE 14.2 - Respondents who would chose a different program if repeating high school by Curriculum Type for Year 1982
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Yes, Different Program	46	158	141	75	420
	10.20	38.16	44.20	39.27	
No, Same Program	405	256	178	116	955
	89.90	61.84	55.80	60.73	

TABLE 14.3 - Respondents who would chose a different program if repeating high school by Curriculum Type for Year 1985
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Yes, Different Program	52	177	139	65	433
	9.72	33.46	43.44	34.39	
No, Same Program	483	352	181	124	1140
	89.90	61.84	55.80	60.73	

TABLE 14.4 - Respondents who would chose a different program if repeating high school by Curriculum Type for Year 1988
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Yes, Different Program	66	143	92	50	351
	8.24	26.48	30.36	26.60	
No, Same Program	735	397	211	138	1481
	91.76	73.52	69.64	73.40	

TABLE 15.2 - Program respondents would select if repeating high school for 1982
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
College	28	89	59	42	218
	58.33	56.69	42.45	57.53	
Genera l	4	5	6	0	15
	8.33	3.18	4.32	0.00	
Different Vo-Tech	0	2	47	2	51
	0.00	1.27	33.81	2.74	
Business/Agriculture	6	17	19	10	52
	12.50	10.83	13.67	13.70	
Vo-Tech	10	44	8	19	81
	20.83	28.03	5.76	26.03	
Total	48	157	139	73	417

TABLE 15.3 - Curriculum tract respondents would select if repeating high school for 1985
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
College	30	99	62	34	225
	54.55	55.31	45.59	51.52	
General	2	6	6	2	16
	3.64	3.35	4.41	3.03	
Different Vo-Tech	1	5	38	2	46
	1.82	2.79	27.94	3.03	
Business/Agriculture	11	21	23	13	68
	20.00	11.73	16.91	19.70	
Vo-Tech	11	48	7	15	81
	20.00	26.82	5.15	22.73	
Total	55	179	136	66	436

TABLE 15.4 - Curriculum tract respondents would select if repeating high school for 1988
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
College	33	69	34	27	163
	45.83	48.94	36.17	51.92	
General	5	4	3	0	12
	6.94	2.84	3.19	0.00	
Different Vo-Tech	0	1	42	2	45
	0.00	0.71	44.68	3.85	
Business/Agriculture	21	21	6	7	55
	29.17	14.89	6.38	13.46	
Vo-Tech	13	46	9	16	84
	18.06	32.62	9.57	30.77	
Total	72	141	94	52	359

TABLE 19.1 - Current Employment/Education Status for Year 1982
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Working Full-time	302	270	242	120	934
	67.11	65.22	75.86	62.83	
Work Full-time/Part-time	40	35	13	20	108
	8.89	8.45	4.08	10.47	
Working PT/not seeking FT	13	16	13	11	53
	2.89	3.86	4.08	5.76	
Working PT/seeking FT	4	3	4	2	13
	1.78	2.90	4.08	5.76	
Self-Employed	14	8	3	2	27
	3.11	1.93	0.94	1.05	
FT student	14	8	3	2	27
	3.11	1.93	0.94	1.05	
FT student/PT work	19	10	2	1	32
	4.22	2.42	0.63	0.52	
Armed Forces	13	9	9	4	35
	2.89	2.17	2.82	2.09	
Homemaker	14	33	13	13	73
	3.11	7.97	4.08	6.81	
Unable to work/health	0	3	1	0	4
	0.00	0.72	0.31	0.00	
Unemployed/seeking	5	3	3	0	11
	1.11	0.72	0.94	0.00	
Unemploy/not seeking	1	0	1	0	2
	0.22	0.00	0.31	0.00	
Other	17	12	2	7	38
	3.78	2.90	0.63	3.66	

TABLE 19.2 - Current Employment/Education Status for Year 1985
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Working Full-time	304	323	243	130	1000
	56.61	61.17	75.94	68.78	
Work Full-time/Part-time	31	47	16	14	108
	5.77	8.90	5.00	7.41	
Working PT/not seeking FT	5	16	4	4	29
	0.93	3.03	1.25	2.12	
Working PT/seeking FT	20	14	2	4	40
	3.72	2.65	0.63	2.12	
Self-Employed	7	15	8	6	36
	1.30	2.84	2.50	3.17	
FT student	58	30	5	4	97
	10.80	5.68	1.56	2.12	
FT student/PT work	64	29	6	6	105
	11.92	5.49	1.88	3.17	
Armed Forces	17	16	10	2	45
	3.17	3.03	3.13	1.06	
Homemaker	4	10	8	12	34
	0.74	1.89	2.50	6.35	
Unable to work/health	1	2	0	0	3
	0.19	0.38	0.00	0.00	
Unemployed/seeking	4	9	9	2	24
	0.74	1.70	2.81	1.06	
Unemploy/not seeking	0	0	0	0	0
	0.00	0.00	0.00	0.00	
Other	22	17	9	5	53
	4.10	3.22	2.81	2.65	

TABLE 19.3 - Current Employment/Education Status for Year 1988
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Working Full-time	91	174	189	103	557
	11.33	32.16	61.56	54.79	
Work Full-time/Part-time	13	21	21	13	68
	1.62	3.88	6.84	6.91	
Working PT/not seeking FT	3	3	3	3	12
	0.37	0.55	0.98	1.60	
Working PT/seeking FT	3	8	7	2	20
	0.37	1.48	2.28	1.06	
Self-Employed	2	5	0	3	10
	0.25	0.92	0.00	1.60	
FT student	358	144	7	19	528
	44.58	26.62	2.28	10.11	
FT student/PT work	295	145	31	27	498
	36.74	26.80	10.10	14.36	
Armed Forces	14	17	17	4	52
	1.74	3.14	5.54	2.13	
Homemaker	7	1	8	8	24
	0.87	0.18	2.61	4.26	
Unable to work/health	0	1	4	0	
	0.00	0.18	1.30	0.00	
Unemployed/seeking work	1	8	9	4	22
	0.12	1.48	2.93	2.13	
Unemployed/not seeking	0	1	3	0	4
	0.00	0.18	0.98	0.00	
Other	16	13	8	2	39
	1.99	2.40	2.61	1.06	

TABLE 20.1 - Employer's Type of Work

FREQUENCY PERCENT	1982	1985	1989	Total
Manufacturing	287	275	170	732
	22.53	19.61	15.61	
Construction	87	122	110	319
	6.83	8.70	10.10	
Services	184	186	106	476
	14.44	13.27	9.73	
Food Service	54	104	191	349
	4.24	7.42	17.54	
Transportation	46	56	41	143
	3.61	3.99	3.76	
Farming	39	47	36	122
	3.06	3.35	3.31	
Health Occupations	144	133	74	351
	11.30	9.49	6.80	
Public Sector	124	140	52	316
	9.73	9.99	4.78	
Other	309	339	309	957
	24.25	24.18	28.37	

TABLE 20.2 - Employers Type of Work for Year 1982

FREQUENCY PERCENT	Academic	General	AVTS	HSVOC	Total
Manufacturing	71	81	95	37	284
	16.82	21.89	31.77	21.02	
Construction	13	21	43	10	87
	3.08	5.68	14.38	5.68	
Services	80	52	20	30	182
	18.96	14.05	6.69	17.05	
Food Service	14	11	17	12	54
	3.32	2.97	5.69	6.82	
Transportation	3	17	19	6	45
	0.71	4.59	6.35	3.41	
Farming	6	13	8	12	39
	1.42	3.51	2.68	6.82	
Health Occupations	57	48	18	21	144
	13.51	12.97	6.02	11.93	
Public Sector	69	37	8	10	124
	16.35	10.00	2.68	5.68	
Other	109	90	71	38	308
	25.83	24.32	23.75	21.59	

TABLE 20.3 - Employers Type of Work for Year 1985

FREQUENCY PERCENT	Academic	General	AVTS	HSVOC	Total
Manufacturing	68	94	72	36	270
	14.95	20.17	24.16	21.18	
Construction	19	42	47	13	121
	4.18	9.01	15.77	7.65	
Services	87	47	28	23	185
	19.12	10.09	9.40	13.53	
Food Service	32	41	20	11	104
	7.03	8.80	6.71	6.47	
Transportation	11	14	21	8	54
	2.42	3.00	7.05	4.71	
Farming	7	15	10	15	47
	1.54	3.22	3.36	8.82	
Health Occupations	51	47	19	15	132
	11.21	10.09	6.38	8.82	
Public Sector	77	40	9	12	138
	16.92	8.58	3.02	7.06	
Other	103	126	72	37	338
	22.64	27.04	24.16	21.76	

TABLE 20.4 - Employers Type of Work for Year 1988

FREQUENCY PERCENT	Academic	General	AVTS	HSVOC	Total
Manufacturing	42	47	63	16	168
	13.25	14.24	22.66	10.46	
Construction	14	31	44	20	109
	4.42	9.39	15.83	13.07	
Services	34	40	12	18	104
	10.73	12.12	4.32	11.76	
Food Service	72	50	43	26	191
	22.71	15.15	15.47	16.99	
Transportation	7	8	22	3	40
	2.21	2.42	7.91	1.96	
Farming	7	8	8	12	35
	2.21	2.42	2.88	7.84	
Health Occupations	27	26	11	10	74
	8.52	7.88	3.96	6.54	
Public Sector	22	11	8	9	50
	6.94	3.33	2.88	5.88	
Other	92	109	67	39	307
	29.02	33.03	24.10	25.49	

TABLE 21.1 - Number of full-time jobs since graduation by curriculum (%)

Number	Academic	General	AVTS	HS Voc	Total
1	17.30	12.52	7.13	5.78	42.73
2	10.43	10.47	5.75	4.72	31.36
3	3.95	5.39	3.11	2.44	14.90
4	1.61	2.28	1.25	0.74	5.87
5	0.74	1.16	0.48	0.45	2.83
6	0.22	0.39	0.35	0.13	1.09
7	0.03	0.29	0.06	0.10	0.48
8	0.03	0.10	0.06	0.06	0.26
9	0.03	0.10	0.16	0.19	0.48

TABLE 21.2 - Number of full-time jobs since graduation by year (%)

Number	1982	1985	1988	Total
1	11.30	15.60	15.70	42.60
2	11.27	12.19	8.02	31.49
3	7.29	5.16	2.39	14.84
4	2.77	2.42	0.73	5.92
5	1.66	0.92	0.25	2.83
6	0.64	0.35	0.13	1.11
7	0.35	0.13	0.00	0.48
8	0.19	0.06	0.00	0.25
9	0.29	0.16	0.03	0.48

TABLE 22.3 - Average Weely Salary by Type of Work for Year 1982

Type of Work	Average Salary
Manufacturing	$427.45
Construction	470.34
Services	432.71
Food Services	319.79
Transportation	428.49
Farming	361.10
Health	392.87
Public Sector	393.54
Other	382.98

TABLE 22.3 - Average Weely Salary by Type of Work for Year 1985

Type of Work	Average Salary
Manufacturing	$367.64
Construction	401.12
Services	350.84
Food Services	258.94
Transportation	384.92
Farming	341.86
Health	386.88
Public Sector	320.42
Other	324.05

TABLE 22.5 - Average Weely Salary by Type of Work for Year 1988

Type of Work	Average Salary
Manufacturing	$283.25
Construction	319.43
Services	209.74
Food Services	186.59
Transportation	309.97
Farming	253.97
Health	203.74
Public Sector	160.48
Other	221.75

TABLE 23.1 - Post-secondary attendance by Curriculum Type and Year of Graduation

	Attended		Never attended	
	Frequency	%	Frequency	%
Curriculum Type				
Academic	1657	93%	121	7%
General	1045	71%	435	29%
AVTS	368	39%	574	61%
HSVOC	262	46%	303	54%
YEAR				
1982	936	68%	442	32%
1985	1111	70%	473	30%
1988	1312	71%	529	29%

TABLE 24.1 - Type of post-secondary institution first attended after high school graduation for year 1982
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Business, Technical	29	81	57	35	202
Or Trade School	6.90	27.93	43.51	39.77	
Community College	23	29	13	12	77
	5.48	10.00	9.92	13.64	
Two-year program	10	13	12	7	42
Univ. Branch Campus	2.38	4.48	9.16	7.95	
Four-year program	335	123	18	12	488
University	79.76	42.41	13.74	13.64	
Other	23	44	31	22	120
	5.48	15.17	23.66	25.00	

TABLE 24.2 - Type of post-secondary institution first attended after high school graduation for year 1985
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Business, Technical	42	88	59	40	229
Or Trade School	8.45	23.34	43.38	45.45	
Community College	22	27	16	9	74
	4.43	7.16	11.76	10.23	
Two-year program	14	14	8	6	42
Univ. Branch Campus	2.82	3.71	5.88	6.82	
Four-year program	379	192	16	23	610
University	76.26	50.93	11.76	26.14	
Other	40	56	37	10	
	8.05	14.85	27.21	11.36	

TABLE 24.3 - Type of post-secondary institution first attended after high school graduation for year 1988
FREQUENCY

PERCENT	Academic	General	AVTS	HSVOC	Total
Business, Technical	54	79	44	30	207
Or Trade School	7.32	20.79	43.56	34.48	
Community College	39	35	15	11	100
	5.28	9.21	14.85	12.64	
Two-year program	18	13	4	4	39
Univ. Branch Campus	2.44	3.42	3.96	4.60	
Four-year program	589	222	16	29	856
University	79.81	58.42	15.84	33.33	
Other	38	31	22	13	104
	5.15	8.16	21.78	14.94	